

CLAIMS

What is claimed is:

1. A back reaming tool comprising:
a tool body adapted to be coupled to a drill string; and
at least one cutting structure mounted to a leg and having cutting elements disposed thereon, wherein the leg is removably coupled to the tool body.
2. The back reaming tool of claim 1, wherein an integral stabilizer is formed on the leg.
3. The back reaming tool of claim 1, wherein the cutting elements are polycrystalline diamond compact studs.
4. The back reaming tool of claim 1, wherein the cutting elements comprise natural diamonds.
5. The back reaming tool of claim 1, wherein the at least one cutting structure is fixed with respect to the leg.
6. The back reaming tool of claim 1, wherein the at least one cutting structure is a roller cone rotatably mounted to the leg and having cutting elements disposed thereon.
7. The back reaming tool of claim 6, wherein an axis of rotation of the roller cone subtends an angle in a range of about 36 to 225 degrees from a line perpendicular to a center line of the tool body.
8. The back reaming tool as defined in claim 7, wherein the angle is in a range of about 40 to 50 degrees.

9. The back reaming tool as defined in claim 7, wherein the angle is about 54 degrees.
10. The back reaming tool as defined in claim 1, wherein the tool body comprises a removable coupling end adapted to couple the tool body to the drill string.
11. The back reaming tool as defined in claim 1, wherein the leg comprises tongues thereon adapted to fit in mating grooves in the tool body, the tongue and grooves adapted to laterally retain the leg on the tool body.
12. The back reaming tool as defined in claim 1, further comprising wear protection on an exterior surface of the leg.
13. The back reaming tool as defined in claim 12, wherein the wear protection comprises hardfacing applied to the exterior surface of the leg.
14. The back reaming tool as defined in claim 12, wherein the wear protection comprises at least one button affixed to the exterior surface of the leg.
15. The back reaming tool as defined in claim 14, wherein the at least one button is formed from at least one of metal carbide, diamond, boron nitride and combinations thereof.
16. The back reaming tool as defined in claim 1, further comprising a tapered exterior surface on the leg, the tapered exterior surface including thereon at least one supplemental cutting element.
17. The back reaming tool as defined in claim 16, wherein the at least one supplemental cutting element is formed from at least one of metal carbide, diamond, boron nitride and combinations thereof.